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DEPARTMENT OF NATURAL RESOURCES

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November 22, 2019

John Byars, General Manager
Canyon Fuel Company, LLC
597 South SR24
Salina, Utah 84654

Subject: Completion of Midterm Review, Canyon Fuel Company, LLC, Sufco Mine,
C/041/0002, Task #5999

Dear Mr. Byars:

On October 3, 2019, Canyon Fuel Company, LLC was informed that the Division of Oil, Gas and Mining (the Division) had commenced a midterm permit review for the Sufco Mine.

The midterm review has now been completed and will now be closed; however, the Division has identified deficiencies that must be addressed. The deficiencies have been included with this letter (See Attached). The name of the author for each of the respective deficiencies has been provided.

Your response to these deficiencies will need to be submitted as an amendment to your MRP and will be processed as a separate task. Please submit the required amendment with the accompanying C1 and C2 forms by no later than December 22, 2019.

If you have any questions regarding these requirements or the Midterm Review process, please don't hesitate to call me at 801-538-5350.

Sincerely,

Steve Christensen
Coal Program Manager

SKC/sqs
cc: Vicky Miller, CFC
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Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0410002
TaskID: 5999
Mine Name: SUFCO MINE
Title: MIDTERM PERMIT REVIEW

General Contents

Identification of Interest

Analysis:

The midterm review of the MRP meets the State of Utah R645 requirements Identification of Interest.

On November 8, 2019, the Canyon Fuel Company, LLC General Chapter 1 was revised to add the following ownership and control updates to Wolverine Fuels, LLC:

Corey Heaps was assigned VP of Operations from 7/16/18 to 10/31/19 and following his tenure of VP of Operations, was reassigned to the position of Vice President, Engineering and Safety effective 10/31/19; Carson Pollastro was appointed as Chief Operating Officer on 10/31/19; and Garrett Atwood was appointed Vice President, Commercial Operations on 7/16/18.

The above-noted revisions were added to the OSM Applicant/Violator System on 11/21/19.

This information was submitted, reviewed and approved through Task ID 6015.

adaniels

Violation Information

Analysis:

The midterm review of the MRP meets the State of Utah R645 requirements for Violation Information.

The Canyon Fuel Company, LLC General Chapter 1 revised Table 1-2 Three Year Violation History of Mining and Reclamation Operations.

The table lists no violations in the last 3 year period.

This information was submitted, reviewed and approved through Task ID 6015.

adaniels

Environmental Resource Information

Vegetation Resource Information

Analysis:

The application does not meet the State of Utah R645-301-320 requirements for Vegetation Resource Information. The Permittee provided a list of eight reference areas for the SUFCO Mine in anticipation of the midterm inspection (email correspondence with Vicky Miller dated 11/4/2019). Various vegetation reports were provided to the Division staff at the midterm inspection which contained maps indicating the location of individual reference but many of the reports, and therefore the identifications of many of the reference areas, are not found in the MRP.

According to the Permittee, of the eight reference areas:

Two reference areas (Riparian and Pinyon Juniper) are in Link Canyon and are to be used in the reclamation of the Link Canyon culvert, substation, and access road with the Link Canyon Riparian reference area also being used for the lower pond at the mine site.

Three reference areas (Sagebrush/Grass, Rabbitbrush/Sagebrush, and Mountain Brush) are located near the waste rock site and are to be used in the reclamation of the waste rock site (Sagebrush/Grass), the waste rock large sediment pond (Rabbitbrush/Sagebrush), and the hillside lifts 4 and 5 (Mountain Brush), as well as the leachfield (Sagebrush/Grass).

One reference area (Sagebrush/Grass) located just north of the sinkhole is to be used in the reclamation of the sinkhole.

Finally, two reference areas (Oakbrush and Pinyon Juniper) located near the mine site ponds are to be used in the reclamation of the exterior of the lower pond and the spring collection system (Oakbrush), the soil nail wall (Pinyon Juniper), the lower substation (Pinyon Juniper), and the portals (Pinyon Juniper).

The mine site itself, minus what is listed above, as well as the disturbance in Link Canyon, minus what is listed above, are labeled as "Pre-Law Disturbance Not Requiring Reference Area" and have no assigned reference area. However, in the Master Technical Analysis, performed by the Division in 1986, it is stated that "[t]he sampling method used was the modified reference area method for mines with existing (pre-Law) disturbance, whereby a reference area is set up and fully characterized in a community type thought to be as similar as possible to the natural one in the area previously disturbed. A permanent reference area has been staked and will be used to judge the adequacy of revegetation efforts." These statements make it appear that a reference area was selected for some pre-Law disturbed areas and that its selection was based on what vegetative community was thought to have existed in the area prior to disturbance. The state of this reference area, its location, and sampled data related to it are unclear based on the current documentation. This information must be provided or clarified in the MRP. Reference areas for other pre-Law disturbed areas, including the main site and Link Canyon, must also be identified.

The above information, and any other relevant information, must be included in the MRP with a narrative describing the reclamation revegetation plan for all disturbed areas of the site. A list of reference areas identifying which affected areas they represent, along with any additional information needed to adequately predict the potential for re-establishing vegetation throughout any areas affected by surface operations incident to mining and reclamation activities, must be part of this narrative.

Furthermore, the Division recommends that the Permittee include GPS coordinates for each reference area as well as signage in the field to facilitate the locating of reference areas when needed.

Deficiencies Details:

The application does not meet the State of Utah R645-301-320 requirements for Vegetation Information. The following deficiency must be addressed prior to final approval:

R645-301-321:

Copies of vegetation reports that are to be used in reference area establishment or analysis must be included in the MRP.

A narrative identifying and describing the use of each reference area for revegetation must be submitted and include a list of each reference area along with the disturbed area it is associated with.

A description of the re-establishment of vegetation for all areas, including the main site and pre-law areas of Link

Maps Vegetation Reference Area

Analysis:

The application does not meet the State of Utah R645-301-323 requirements for Vegetation Reference Area Maps. The Permittee provided a list of eight reference areas for the SUFCO Mine in anticipation of the midterm inspection (email correspondence with Vicky Miller dated 11/4/2019). This list includes: two Link Canyon reference areas (Pinyon Juniper and Riparian), two Pond/Segregation reference areas (Oakbrush and Pinyon Juniper), one Sinkhole reference area (Sagebrush/Grass), and three Waste Rock Site reference areas (Sagebrush/Grass, Rabbitbrush/Sagebrush, and Mountain Brush). Various vegetation reports were provided to the Division staff at the midterm inspection which contained maps indicating the location of individual reference but many of the reports are not found in the MRP. Plate 3-1 is named in the MRP as being a map showing reference areas but it appears to only show the Sinkhole reference area and lacks the others.

Deficiencies Details:

The application does not meet the State of Utah R645-301-323 requirements for Vegetation Reference Area Maps. The following deficiency must be addressed prior to final approval:

R645-301-323: The location and boundaries for all reference areas must be delineated on a map in the MRP.

Operation Plan

Topsoil and Subsoil

Analysis:

The application does not meet the State of Utah R645 requirements for Soils Operation Plan, because there is outdated information in the MRP which is not clear and concise and because the surface facilities map does not show all stockpiles at the Waste Rock site.

EAST SPRING CANYON:

The East Spring Canyon facilities were constructed pre-law. Consequently topsoil was not salvaged during initial construction. Substitute topsoil and subsoil has been identified in specific pad locations as follows (Section 2.3.1.4):

2,160 CY of subsoil stored in the substation bin wall

5,300 CY of road base

11,747 CY subsoil stored at the waste rock site

19,207 CY total

Post-SMCRA topsoil stockpiles have been segregated and protected. They are described in Vol. 1 Section 2.3.1.1 and 2.3.1.4 and Section 2.3.4.2 as follows:

Spring Canyon & Convulsion Canyon facilities stockpiles:

1,200 CY adjacent to the sediment pond (p. 2-19, Plate 2-1)

27 CY on substation pad (p. 2-19, Plate 2-1)

1,488 CY at overflow pond (pp. 2-17, 2-19, 2-20, App.2-2, Plate 5-2B).

2,715 CY total

Link Canyon stockpiles:

224 CY substation #1 (pp. 2-12, 2-20 plate 5-2D) (may have been redistributed in reclamation of substation #1.)

118 CY #2 substation (pp. 2-12, 2-20 plate 5-2E)

38 CY Link portal stockpile (pp. 2-13, 2-20 Plate 5-2F)

380 CY total

There is an in-determinant volume of substitute topsoil available in the fill and outslopes of the pads (Section 2.2.4). In addition there is 11,747 CY subsoil stockpiled at the WRS which is dedicated for the mine site (WRV, p. 2-4). This subsoil was salvaged from The water tank (MRP, Chap 2, p.2-17 and the Nail wall (MRP, Chap 2, p. 2-20).

Similarly, 56 cu yd of topsoil stored at the WR site is reserved for reclamation of the main facilities water tank (p. 2-16 & 2-17).

WASTE ROCK SITE:

The waste rock site is 34.08 acres total (Vol 1, Chap. 1, p. 1-15). The waste rock site development and contemporaneous reclamation is shown on the series Maps 2-A through 2-E. To date, topsoil and subsoil has been salvaged from Phases 1 – 4. Map 2G provides soil salvage and replacement estimates. Surveyed topsoil and subsoil volumes are reported in the Table at the end of MRP, Chap 2, p. 2-31. Approximately 756 cu yds of WR topsoil stockpile is reserved for reclamation of the subsoil stockpile area (p. 2-20).

Subsoil and Topsoil for Phases of Waste Rock site are described on the Table at the end of WRV, Chapter 2. The Waste Rock Map 4 series shows surface facilities and operational phases of the waste rock site facilities. Topsoil and subsoil salvage at the site has been completed through Phase 4, which corresponds to Map 4D. Map 4D shows two stockpile locations and provides a volume for those stockpiles. However, there are currently four stockpiles at the waste rock site. The third and fourth stockpiles are not shown on the Phase 4 Map 4D, because they were not originally contemplated. Since these stockpiles have been in place almost a year and appear to be long term, they must be shown on the surface facility map.

The As built volumes for phase 3 & 4 stockpiles is found in Appendix IX, which also describes the Phase 3 & 4 stockpiles (approval pending response to deficiencies identified in Task 5994).

Deficiencies Details:

The application does not meet the R645-301-121.200, clear and concise requirements or surface facility map requirements R645-301-521.122. The following deficiency must be addressed prior to final approval:

R645-301-121.200, (Item 1) Chapter 2 should provide a table of stockpiled volumes for Spring Canyon and their location. (Item 2) Statements in Vol. 1 Chap 2, should be updated to state a total amount of topsoil and subsoil stored at the WRS which is dedicated to the Spring Canyon site at final reclamation. (Item 3) A statement at the top of p. 2-20 refers to MRP Section 3.1.6 which could not be found. (Item 4) Information in Chapter 2 and on Map 5-2 D should be updated to indicate the redistribution of one topsoil pile and completed reclamation at Link Canyon. (Item 5) The stockpile volumes on Map 4D should agree with the as-built volumes reported in the Soil Volume Table at the end of Waste Rock Volume Chapter 2.

R645-301-521.122 and -521.165, The Phase 3 & 4 topsoil/subsoil stockpiles at the Waste Rock site must be shown on a surface facility map.

pburton

Spoil Waste Coal Mine Waste

Analysis:

The midterm review of the Mining and Reclamation Plan has determined that the State of Utah R645 requirements for Coal Mine Waste have been met.

Maps 2A through 2E depict the progression of the waste rock site as it is expanded through phases. A field visit

associated with the midterm review (11/19/2019) verified that the waste rock site had been stripped of topsoil and subsoil volumes through Phase 4. The updated volumes and as-built features for the current stages of construction at the waste rock site are included in Task# 5994 and are forthcoming. On the date of the field visit, it was pointed out that the approximate volume of Phase 1 is currently only 15% full, down from about 75% last year. The volume was recently reduced because the coal mine waste material had been reassessed as having commercial value and was blended with a higher grade product and sold. There were no facilities, utility installations, nor non-coal waste present at the waste rock site.

jeatchel

Hydrologic Ground Water Monitoring

Analysis:

The midterm review of the MRP meets the requirements of Hydrologic: Ground Water Monitoring.

The Sufco ground water monitoring continues to be carried out in compliance with the approved plan contained in the MRP and is entered into the DOGM database in a timely manner.

adaniels

Hydro Surface Water Monitoring

Analysis:

The midterm review of the MRP meets the requirements of Hydrologic: Surface Water Monitoring.

The Sufco surface water monitoring continues to be carried out in compliance with the approved plan contained in the MRP and is entered into the DOGM database in a timely manner.

adaniels

Hydrologic Impoundments

Analysis:

The midterm review of the MRP meets the State of Utah R645 requirements for Hydrologic Impoundments.

Plates 7-4 and 7-4A, which depict the main facility sediment ponds were reviewed and verified during the field visit associated with the midterm review. These Plates appeared to be accurate matched what was seen in the field. The upper sediment pond was undergoing routine cleaning during the midterm inspection to remove sediment build-up.

While visiting the waste rock site Map 7 of the approved Waste Rock Volume of the MRP was reviewed for accuracy and appeared to match what was seen in the field.

There are no updates required of these drawings.

adaniels

Reclamation Plan

Topsoil and Subsoil

Analysis:

The application meets the State of Utah R645 requirements for Soils Reclamation Plan. The total disturbed area is 54.125 acres (p. 1-15).

The East Spring Canyon facilities were constructed pre-law. Consequently topsoil was not salvaged during initial construction. Substitute topsoil and subsoil will be recovered from the pad.

Spring Canyon & Convulsion Canyon Facilities total disturbed area is 18.797 acres, which includes the spring collection field, the pump house, the water tank, 3 East and 4 East portals, and South portals, but does not include leach field (p. 1-14, Plate 5-2Av15):

There MRP states that there is an in-determinant volume of substitute topsoil available in the fill and outslopes of the pads (Section 2.2.4, p. 2-10 and 2-23). The interim slopes cover an area of approximately 3 acres below the pad and behind the office/portals. If one foot were recovered from these interim seeded slopes, then 4,84 CY of substitute topsoil will be recovered. The pond embankment is approximately 0.17 acres in area. If 18 inches of topsoil is recovered from the pond embankment, then another 416 CY of substitute topsoil will be recovered.

There MRP states that there is an in-determinant volume of substitute topsoil available in the fill and outslopes of the pads (Section 2.2.4, p. 2-10 and 2-23). The interim slopes cover an area of approximately 3 acres below the pad and behind the office/portals. If one foot were recovered from these interim seeded slopes, then 4,84 CY of substitute topsoil will be recovered. The pond embankment is approximately 0.17 acres in area. If 18 inches of topsoil is recovered from the pond embankment, then another 416 CY of substitute topsoil will be recovered.

Final reclamation grading of the mine site is described in Section 5.4.2.2 and Appendix 2-4. Cut/Fill estimates superceding those in App. 2-4 are presented in Appendix 2-5. Approximately 74,000 cu yds will be moved. Final reclamation contours are shown on Plate 5-3A & B. Cross sections that illustrate cut and fill areas are shown on Plate 5-4. A six inch substitute topsoil layer is described in Section 2.3.3.2.

Random composites ample taken of every 2,000 tons of substitute topsoil pulled from the upper sediment pond dam, the fill slope above the upper sediment pond and the original surface pad (Sec. 2.2.4, p. 2-10). Substitutes will be supplemented as described in Section 2.4.3, p.

Link Canyon total disturbed area is 0.48 acres (p. 1-12). There are 380 CY of topsoil stockpiled for reclamation. This will result in a redistribution depth of approximately 6 inches.

Waste Rock Disposal Site total disturbed area is 34.08 acres (p. 1-15).

The waste rock site is contemporaneously reclaimed through Phase 1 as shown in the Map 2 series.

pburton

Bonding and Insurance General

Analysis:

The Midterm review of the Mining and Reclamation Plan has determined that the State of Utah R645 requirements for General Insurance and Bonding have been met.

The reclamation bond in the amount of \$5,103,000 is held through Ironshore Indemnity Inc., an A-rated insurance company. Liability insurance is provided through Great Midwest Insurance Co. Policy number GL00169760 is current and is set to expire on February 1, 2020.

jeatchel

Bonding Determination of Amount

Analysis:

The Midterm review of the Mining and Reclamation Plan has determined that the State of Utah R645 requirements for Determination of Bonding Amount have not been met.

A Midterm review of the reclamation bond revealed that numerous changes and improvements were added to the bond as a result of the previous Midterm review in the early part of 2015. The current review of the reclamation bond revealed that the Overhead and Profit costs were not added to the direct unit costs at the time of the previous review. Consequently, the bond must be updated to include Overhead and Profit in all direct unit costs in the Demolition and Revegetation sections of the bond. Additionally, the total bond amount must be escalated by the 5-year escalation rate of 2.32%.

Deficiencies Details:

The Midterm review of the Mining and Reclamation Plan has determined that the State of Utah R645 requirements for Determination of Bonding Amount have not been met. The following deficiency must be addressed prior to final approval:

R645-301-830: Permittee must update the reclamation bond to account for Overhead and Profit in all direct unit costs in the Demolition and Revegetation sections. Once Overhead and Profit costs have been added to the direct unit costs, the total bond amount must be escalated by the 5-year escalation rate of 2.32%.

jeatchel